

§ 21.33

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specifications, necessary to define the configuration and the design features of the product shown to comply with the requirements of that part of this subchapter applicable to the product;

(b) Information on dimensions, materials, and processes necessary to define the structural strength of the product;

(c) The Airworthiness Limitations section of the Instructions for Continued Airworthiness as required by parts 23, 25, 26, 27, 29, 31, 33 and 35 of this subchapter, or as otherwise required by the Administrator; and as specified in the applicable airworthiness criteria for special classes of aircraft defined in § 21.17(b); and

(d) For primary category aircraft, if desired, a special inspection and preventive maintenance program designed to be accomplished by an appropriately rated and trained pilot-owner.

(e) Any other data necessary to allow, by comparison, the determination of the airworthiness, noise characteristics, fuel venting, and exhaust emissions (where applicable) of later products of the same type.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21–27, 34 FR 18363, Nov. 18, 1969; Amdt. 21–51, 45 FR 60170, Sept. 11, 1980; Amdt. 21–60, 52 FR 8042, Mar. 13, 1987; Amdt. 21–68, 55 FR 32860, Aug. 10, 1990; Amdt. 21–70, 57 FR 41368, Sept. 9, 1992; Amdt. No. 21–90, 72 FR 63404, Nov. 8, 2007]

§ 21.33 Inspection and tests.

(a) Each applicant must allow the Administrator to make any inspection and any flight and ground test necessary to determine compliance with the applicable requirements of the Federal Aviation Regulations. However, unless otherwise authorized by the Administrator—

(1) No aircraft, aircraft engine, propeller, or part thereof may be presented to the Administrator for test unless compliance with paragraphs (b)(2) through (b)(4) of this section has been shown for that aircraft, aircraft engine, propeller, or part thereof; and

(2) No change may be made to an aircraft, aircraft engine, propeller, or part thereof between the time that compliance with paragraphs (b)(2) through (b)(4) of this section is shown for that aircraft, aircraft engine, propeller, or

part thereof and the time that it is presented to the Administrator for test.

(b) Each applicant must make all inspections and tests necessary to determine—

(1) Compliance with the applicable airworthiness, aircraft noise, fuel venting, and exhaust emission requirements;

(2) That materials and products conform to the specifications in the type design;

(3) That parts of the products conform to the drawings in the type design; and

(4) That the manufacturing processes, construction and assembly conform to those specified in the type design.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21–17, 32 FR 14926, Oct. 28, 1967; Amdt. 21–27, 34 FR 18363, Nov. 18, 1969; Amdt. 21–44, 41 FR 55463, Dec. 20, 1976; Amdt. 21–68, 55 FR 32860, Aug. 10, 1990; Amdt. 21–68, 55 FR 32860, Aug. 10, 1990]

EFFECTIVE DATE NOTE: By Amdt. No. 21–92, 74 FR 53386, Oct. 16, 2009, § 21.33(a) introductory text was amended by removing the words “the Federal Aviation Regulations” and adding, in their place, the words “this subchapter”, effective Apr. 14, 2010. This amdt. was postponed to Apr. 16, 2011 at 75 FR 9095, Mar. 1, 2010.

§ 21.35 Flight tests.

(a) Each applicant for an aircraft type certificate (other than under §§ 21.24 through 21.29) must make the tests listed in paragraph (b) of this section. Before making the tests the applicant must show—

(1) Compliance with the applicable structural requirements of this subchapter;

(2) Completion of necessary ground inspections and tests;

(3) That the aircraft conforms with the type design; and

(4) That the Administrator received a flight test report from the applicant (signed, in the case of aircraft to be certificated under Part 25 [New] of this chapter, by the applicant's test pilot) containing the results of his tests.

(b) Upon showing compliance with paragraph (a) of this section, the applicant must make all flight tests that the Administrator finds necessary—

(1) To determine compliance with the applicable requirements of this subchapter; and

(2) For aircraft to be certificated under this subchapter, except gliders and except airplanes of 6,000 lbs. or less maximum certificated weight that are to be certificated under Part 23 of this chapter, to determine whether there is reasonable assurance that the aircraft, its components, and its equipment are reliable and function properly.

(c) Each applicant must, if practicable, make the tests prescribed in paragraph (b)(2) of this section upon the aircraft that was used to show compliance with—

(1) Paragraph (b)(1) of this section; and

(2) For rotorcraft, the rotor drive endurance tests prescribed in § 27.923 or § 29.923 of this chapter, as applicable.

(d) Each applicant must show for each flight test (except in a glider or a manned free balloon) that adequate provision is made for the flight test crew for emergency egress and the use of parachutes.

(e) Except in gliders and manned free balloons, an applicant must discontinue flight tests under this section until he shows that corrective action has been taken, whenever—

(1) The applicant's test pilot is unable or unwilling to make any of the required flight tests; or

(2) Items of noncompliance with requirements are found that may make additional test data meaningless or that would make further testing unduly hazardous.

(f) The flight tests prescribed in paragraph (b)(2) of this section must include—

(1) For aircraft incorporating turbine engines of a type not previously used in a type certificated aircraft, at least 300 hours of operation with a full complement of engines that conform to a type certificate; and

(2) For all other aircraft, at least 150 hours of operation.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-40, 39 FR 35459, Oct. 1, 1974; Amdt. 21-51, 45 FR 60170, Sept. 11, 1980; Amdt. 21-70, 57 FR 41368, Sept. 9, 1992]

§ 21.37 Flight test pilot.

Each applicant for a normal, utility, acrobatic, commuter, or transport category aircraft type certificate must provide a person holding an appropriate pilot certificate to make the flight tests required by this part.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-59, 52 FR 1835, Jan. 15, 1987]

§ 21.39 Flight test instrument calibration and correction report.

(a) Each applicant for a normal, utility, acrobatic, commuter, or transport category aircraft type certificate must submit a report to the Administrator showing the computations and tests required in connection with the calibration of instruments used for test purposes and in the correction of test results to standard atmospheric conditions.

(b) Each applicant must allow the Administrator to conduct any flight tests that he finds necessary to check the accuracy of the report submitted under paragraph (a) of this section.

[Doc. No. 5085, 29 FR 14564, Oct. 24, 1964, as amended by Amdt. 21-59, 52 FR 1835, Jan. 15, 1987]

§ 21.41 Type certificate.

Each type certificate is considered to include the type design, the operating limitations, the certificate data sheet, the applicable regulations of this subchapter with which the Administrator records compliance, and any other conditions or limitations prescribed for the product in this subchapter.

§ 21.43 Location of manufacturing facilities.

Except as provided in § 21.29, the Administrator does not issue a type certificate if the manufacturing facilities for the product are located outside of the United States, unless the Administrator finds that the location of the manufacturer's facilities places no undue burden on the FAA in administering applicable airworthiness requirements.

§ 21.45 Privileges.

The holder or licensee of a type certificate for a product may—